



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,692	04/02/2004	David Weck	609-034	9732

22429 7590 07/24/2007
LOWE HAUPTMAN BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314

EXAMINER.

JOYNER, KEVIN

ART UNIT	PAPER NUMBER
----------	--------------

1744

MAIL DATE	DELIVERY MODE
-----------	---------------

07/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/815,692		WECK ET AL.	
	Examiner		Art Unit	
	Kevin C. Joyner		1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-17,19-22 and 29-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7-17, 19-22, and 29-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 7, 9, and 10, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalman (Publication No. DE 19844864A1).

Kalman discloses in the abstract a method of reducing the odor emanating from a feces deposited by a human making a bowel movement in a toilet, comprising the step of spraying a liquid deodorizer to the toilet immediately prior to making the bowel movement. More specifically, since one of the advantages of the step is the reduction of water splashes, then it is known to take place immediately prior to making a bowel movement. Regarding the rest of the limitations of claim 1, as well as the limitations of claim 7, 9 and 10, which require that the spray consist primarily of spherical droplets having a maximum surface area of about $78 \times 10^{-12} \text{ m}^2$ or a maximum diameter of about 0.0025mm. It would have been well within the purview of one of ordinary skill in the art to optimize the surface area as well as the diameter of the droplets in order to maximize the deodorization process. Only the expected results would be attained (For a more detailed explanation, see *Applicants principle arguments, section (a)* in the **Response to Arguments** below). Regarding the spherical shape, all spray containers spraying a

Art Unit: 1744

liquid will spray droplets in a spherical shape due to the force of gravity (For a more detailed explanation, see *Applicants principle arguments, section (b)* in the **Response to Arguments** below). In regards to claim 3, it is first noted that while Kalman does not specifically disclose the number of times the liquid is sprayed, Kalman does disclose that the spray be applied in such a way that it covers the entire surface of the water. Therefore, the number of sprays is dependent upon the size of the toilet, the amount of liquid sprayed, the distance from the spray bottle to the bowl, etc. One of ordinary skill in the art would readily recognize that multiple sprays would be required to completely cover the entire surface of the water. Furthermore, it is well known in the art of deodorizing that applying the same spray more than once increases the odor reduction and it is well within the purview of one of ordinary skill in the art to apply this spray as many times as they feel necessary in order to achieve an acceptable level of deodorization (For a more detailed explanation, see *Applicants principle arguments, section (c)* in the **Response to Arguments** below). Therefore, it would have been well within the purview and thus obvious for one of ordinary skill in the art to spray the liquid three or more times in the method of Kalman in order to increase the efficiency of reducing the odor.

3. Claims 4, 5, 11-14, 17, 19, 21, 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalman (Publication No. DE 19844864A1) in view of Lin et al. (U.S. Patent No. 5,863,882).

Kalman is relied upon as set forth above. Kalman does not particularly disclose the composition of the liquid, in particular whether the liquid includes the enzymes

amylase, protease and lipase. However, Kalman does disclose the liquid comprises soapy water, which provides cleanliness to the toilet. Lin discloses a method for cleaning toilets (column 1, lines 13-20) that uses a liquid containing the enzymes amylase, protease and lipase in order to reduce the growth of an indicator organism and degrade lipids, proteins, and carbohydrates (column 4, lines 40-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the liquid spray of Kalman to include enzymes amylase, protease, and lipase in order to reduce the growth of an indicator organism and degrade lipids, proteins, and carbohydrates as shown by Lin (For a more detailed explanation, see *Applicants principle arguments, section (d)* in the **Response to Arguments** below). The limitations with respect to claims 11-14, 17, 19, 21, 22, and 32 are met as applied to claims 1, 3-5, 7, 9, and 10. Therefore, the corresponding explanations are relied upon as necessary.

4. Claims 15, 16, 30, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalman (Publication No. 198448864A1) in view of Lin et al. (U.S. Patent No. 5,863,882) as applied to claims 4, 5, and 11-14, 17, 19, 21, 22, and 32 above, and further in view of Mallett et al. (U.S. Patent No. 4,992,213).

Kalman in view of Lin is relied upon as set forth above. Kalman does not particularly disclose the composition of the liquid, in particular that the liquid includes the emulsifiers nonylphenol, propylene glycol and water at about 90% by volume. It is noted that Kalman does disclose the liquid is soapy water, which cleans the toilet. It is well known in the cleaner art to provide liquid spray cleaners with surfactants and

emulsifiers. For example, Mallett shows an example in the art of a general household, non-toxic cleaner, which includes nonylphenol as a surfactant and propylene glycol as an emulsifier in a base of water at about 90% by volume as shown in the examples in columns 2 & 3. It would have been obvious at the time of the invention to provide the liquid spray cleaner in Kalman with conventionally known additives such as nonylphenol and propylene glycol in a base of water at about 90% by volume in order to provide the cleaner with surfactant and emulsifying properties as exemplified by Mallett.

5. Claims 8, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalman (Publication No. 19844864A1) in view of Baarda (U.S. Publication No. 2002/0190404 A1).

Kalman is relied upon as set forth above. Kalman is silent with regards to the shape and angle of the spray pattern with respect to the originating region; therefore, it would have been necessary for one of ordinary skill in the art to look to the prior art for particulars of the spray pattern. Baarda discloses that it is known in the art to use a spray with a conical pattern during a deodorization and sanitization process (paragraphs 57-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the spray in Kalman with a conical pattern as is considered well known in the art and further exemplified by Baarda. Regarding the limitations of the angle of the spray at an originating region, it would have been well within the purview of one of ordinary skill in the art to optimize the angle of the spray at the originating region to 40 degrees in order to maximize the dispersion of the spray throughout the system. Only the expected results would be attained.

Art Unit: 1744

6. Claims 20 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalman (Publication No. 198448864A1) in view of Lin et al. (U.S. Patent No. 5,863,882) as applied to claims 4, 5, and 11-14, 17, 19, 21, 22, and 32 above, and further in view of Baarda (U.S. Publication No. 2002/0190404 A1).

Kalman in view of Lin is relied upon as set forth above. Kalman in view of Lin is silent with regards to the shape and angle of the spray pattern with respect to the originating region; therefore, it would have been necessary for one of ordinary skill in the art to look to the prior art for particulars of the spray pattern. Baarda discloses that it is known in the art to use a spray with a conical pattern during a deodorization and sanitization process (paragraphs 57-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the spray in Kalman in view of Lin with a conical pattern as is considered well known in the art and further exemplified by Baarda. Regarding the limitations of the angle of the spray at an originating region, it would have been well within the purview of one of ordinary skill in the art to optimize the angle of the spray at the originating region to 40 degrees in order to maximize the dispersion of the spray throughout the system. Only the expected results would be attained.

Response to Arguments

7. Applicant's arguments filed May 15, 2007 with respect to claims 1-7, 9-19, and 21-22 have been fully considered but they are not persuasive.

Applicants' principle arguments are:

(a) The office action incorrectly alleges it would have been well within the purview of one of ordinary skill any art to optimize the surface area of the material Kalman sprays into the toilet bowl, as well as the diameter of the droplets, in order to maximize the deodorization process. Kalman discloses a process wherein scented foam is sprayed onto the water surface of a toilet basin. The scented foam consists of a mixture of soapy water and a scented substance. Figures 1 and 2 and the description of the Kalman reference indicate Duftschaum (scented foam) 4 is in the form of large bubbles on the top surface of Wassers (water) 1 in the water closet (WC). A foam of soapy water and a scented substance would appear to have a surface area that is considerably in excess of $78 \times 10^{-12} \text{ m}^2$.

While it is noted that the spray will turn into a foamy product on the surface of the water comprising a surface area that is in excess of 78×10^{-12} , the **spray being applied** to the surface of the water will be particle size. It is important to note from the remarks that, "the Kalman reference indicate Duftschaum (**scented foam**) 4 is in the form of large bubbles on the **top surface of Wassers (water)** 1 in the water closet (WC)," which directly indicates that the spray has already been applied to the water and turned into a scented foam. The limitations of the claim state, "the liquid **being applied** as a spray consisting essentially of droplets..." which indicate that the spray is in the present tense and is not the solution that has already been applied to the water. Thus, the spray that is **being applied** in the reference of Kalman is a spray consisting of particle sized droplets, and it would be well within the purview of one of ordinary skill in the art to

Art Unit: 1744

optimize the surface area of the spray being applied, as well as the diameter of the droplets in the reference of Kalman in order to maximize the deodorization process.

(b) The examiner is requested to provide proof that all spray containers spray liquid droplets in a spherical shape due to the force of gravity.

Baarda (U.S. Publication No. 2002/0190404 A1) discloses in paragraph 22 that the spray of liquid that enters the chamber tend to be spherical in shape. As such, Baarda has disclosed an example of a spraying device the produces spherical droplets without variations in order to produce this particular shape. Therefore, the reference provides an example that droplets that are sprayed from a nozzle are spherical.

(c) Concerning the allegations that it would have been obvious to have sprayed multiple times to completely cover the entire surface of the water pond. The Kalman soapy water-scented substance foam would have a tendency to form large bubbles that spread across the surface of the water pond in the water closet without multiple applications. The consumer is not likely to waste his/her money by using the Kalman soapy water scented substance foam unnecessarily.

As noted in the previous Office Action, the number of sprays is completely dependent upon the size of the toilet, the amount of liquid sprayed, the distance from the spray bottle to the bowl and other factors that may be present. More specifically, a larger bowl may not be substantially covered with one spray and thus multiple sprays are necessary. Similarly, an operator who could not or chooses not to pull the trigger of

Art Unit: 1744

the spray nozzle to the fullest extent would not spray an efficient amount to produce the desired result, and thus would have to spray the bowl multiple times until that person would feel an adequate amount has been added.

(d) While Lin et al indicates the enzymes amylase, protease, and lipase can be applied to a toilet bowl to degrade or promote the degradation of lipids, proteins and carbohydrates common in domestic sewage, the enzymes are according to the Lin et al disclosure, apparently sprayed onto a surface of a domestic toilet bowl. However, column 3, lines 12-18 indicates the formula is left on the surface or scraped against the surface with a brush for not less than 10 minutes, after which time the product is flushed or rinsed with water and discharged from the fixture. The requirement for the enzyme of Lin et al to remain on the surface of the toilet for at least 10 minutes would lead one of ordinary skill in the art away from considering the Lin et al disclosure in combination with Kalman to make the subject matter of claim 13 obvious. Claim 13 requires the enzyme to be applied to the toilet immediately prior to making a bowel movement.

Lin does not disclose that the formula is left on the contaminated area for not less than ten minutes due to the fact that the amylase, protease, and lipase must be in contact with the contaminated area to perform properly. The formula may be left on the contaminated area for not less than ten minutes in order to allow the fragrance to emit throughout the atmosphere. Furthermore, column 4, lines 53-55 specifically state that the enzymes have excellent waste degrading capabilities, wherein the waste is referred to as biodegradable organic waste found in sewage lines. Thus, more than adequate

motivation is provided to combine the enzymes of Lin with the method of Kalman in order to take advantage of the waste degrading capabilities.

(e) Kalman merely attempts to mask the odor by using the soapy water-scented foam. In contrast the combination of elements set forth in claims 4 and 5 penetrates and breaks down the odor in human feces; the defined surface area has been found to provide best results.

Kalman is not relied upon with respect to claims 4 and 5. The combination of Kalman in view of Lin is relied upon with respect to claims 4 and 5. Furthermore, the idea of breaking down the offensive odors as stated above is the motivation in order to combine the two references as stated in reference to claims 4 and 5.

(f) Clarification is in order for the rejection of claim 20 on page 5 of the Office Action.

From the paragraph that directly follows the rejection statement on page 5, it is obvious that a typographical error was made and the rejection was intended for claims 15 and 16.

(g) If the Examiner was relying on the combination of Kalman, Lin et al. and Mallett et al in connection with claims 15 and 16, the Applicants note that Mallett et al is concerned with ingredients that act separately, with no reaction between the components. There is nothing in the record to indicate that this main objective of Mallett

et al. is achieved if the soapy water-scented foam composition of Kalman and the enzymes of Lin et al are combined with the Mallett et al. composition.

The examiner merely applied Mallett to disclose that one of ordinary skill in the art would utilize the emulsifiers of nonylphenol, and propylene glycol, in the method of Kalman in view of Lin as such are commonly known active cleaning agents in sterilizing solutions (column 1, lines 46-68). Therefore, it is not important as to whether the entire composition of Mallett would perform adequately in the composition of Kalman in view of Lin.

8. Applicant's arguments, see page 11, filed May 15, 2007, with respect to the rejection(s) of claim(s) 8 and 20 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kalman (Publication No. 198448864A1), Lin et al. (U.S. Patent No. 5,863,882) and Baarda (U.S. Publication No. 2002/0190404 A1). The explanation is relied upon as set forth above with respect to claims 8, 20, 29 and 31.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin C. Joyner whose telephone number is (571) 272-2709. The examiner can normally be reached on M-F 8:00-4:30.

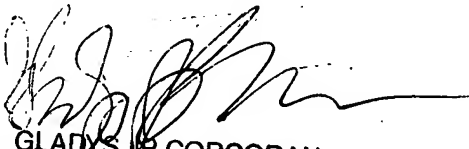
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone

Art Unit: 1744

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCJ



GLADYS P. CORCORAN
SUPERVISORY PATENT EXAMINER